

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. David A. Jones. (Reg # 50004) on 08/22/2011.

The application has been amended as follows:

Claim 21. (Currently Amended) A method for determining an actual position of a geodetic instrument comprising a global positioning system which is based on the reception of shadowable signals of the global positioning system and a dead range within which the propagation of the shadowable signals of the global positioning system are impaired in such a way that a direct determination of the actual position by means of the global positioning system is at least limited comprising the following acts:

recording of a first piece of image information from a first known position determined by means of the global positioning system which is based on the reception of shadowable signals of the global positioning system and the dead range within which the propagation of the shadowable signals of the global positioning system are impaired in such a way that a direct determination of the

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actual position by means of the global positioning system is at least limited, the first piece of image information having at least two identifiable reference structures on a building which can be detected at least from a partial region of the dead range and measurement of at least one first distance from the first known position, the first distance being coordinated indirectly or directly with the said at least two identifiable reference structures on the building;

recording of a second piece of image information from a second known position determined by means of the global positioning system, wherein the global positioning system includes a satellite-supported system, the second piece of image information having at least the said two identifiable reference structures on the building and measurement of at least one second distance from the second known position, the second distance being coordinated indirectly or directly with the said at least two identifiable reference structures on the building;

recording of a piece of actual image information from the actual position, the actual image information having the said at least two identifiable reference structures on the building and measurement of at least one actual distance from the actual position, the actual distance being coordinated indirectly or directly with the said at least two identifiable reference structures on the building, wherein the recording of the first and second pieces of image information and the measurement of the first and second distances are carried out in an automated manner; and

derivation of the actual position of the geodetic instrument by referencing relative to the said at least two identifiable reference structures on the building, wherein in the derivation of the actual position, a transformation is used which links the actual position via the said at least two identifiable reference structures on the building in the first and second image information to the first known position and the second known position, wherein the said at least two identifiable reference structures on the building are tracked and/or identified automatically.

Claim 23. (Currently Amended) The method according to Claim 21, wherein one distance is measured in each case in the measurement of the distances to each of the [[reference points]] said at least two identifiable reference structures on the building.

Claim 25. (Canceled)

Claim 26. (Currently Amended) The method according to Claim ~~[[25]]~~ 21, wherein the derivation of the actual position is effected by means of a trilinear surveying method

Claim 27. (Canceled)

Claim 30. (Canceled)

Claim 31. (Canceled)

Claim 32. (Currently Amended) The method according to Claim 21, wherein the global positioning system includes an Earth-supported system.

Claim 33. (Currently Amended) The method according to claim 32, wherein the global positioning system includes a Total Positioning System.

Claim 34. (Cancelled)

Claim 35. (Currently Amended) The method according to Claim 21, wherein at least the first piece of image information is stored and the said at least two identifiable reference structures on the building in the second piece of image information and/or the actual image information are identified by image processing methods.

Claim 36. (Currently Amended) The method according to Claim 35, wherein the said at least two identifiable reference structures on the building in the second piece of image information and/or the actual image information are identified by matching methods.

Claim 37. (Canceled)

Claim 38. (Currently Amended) The method according to claim ~~[[37]]~~ 21, wherein the recording of the first and second pieces of image information and the measurement of the first and second distances are constantly repeated.

Claim 39. (Canceled)

Claim 40. (Cancelled)

Claim 41. (Currently Amended) A device for determining an actual position of a geodetic instrument ~~[[according to the method of claim 21]]~~, the device comprising the following:

an image recording unit;

a telemeter; and

a data processing unit configured to derive the actual position, wherein the device is configured to perform the following method ~~[[of claim 21]]~~ in an automated manner:

recording of a first piece of image information from a first known position determined by means of a global positioning system which is based on the reception of shadowable signals of the global positioning

system and the dead range within which the propagation of the shadowable signals of the global positioning system are impaired in such a way that a direct determination of the actual position by means of the global positioning system is at least limited, the first piece of image information having at least two identifiable reference structures on a building which can be detected at least from a partial region of the dead range and measurement of at least one first distance from the first known position, the first distance being coordinated indirectly or directly with the said at least two identifiable reference structures on the building;

recording of a second piece of image information from a second known position determined by means of the global positioning system, wherein the global positioning system includes a satellite-supported system, the second piece of image information having at least the said two identifiable reference structures on the building and measurement of at least one second distance from the second known position, the second distance being coordinated indirectly or directly with the said at least two identifiable reference structures on the building;

recording of a piece of actual image information from the actual position, the actual image information having the said at least two identifiable reference structures on the building and measurement of at least one actual distance from the actual position, the actual distance being coordinated indirectly or directly with the said at least two identifiable

reference structures on the building, wherein the recording of the first and second pieces of image information and the measurement of the first and second distances are carried out in an automated manner; and

derivation of the actual position of the geodetic instrument by referencing relative to the said at least two identifiable reference structures on the building, wherein in the derivation of the actual position, a transformation is used which links the actual position via the said at least two identifiable reference structures on the building in the first and second image information to the first known position and the second known position, wherein the said at least two identifiable reference structures on the building are tracked and/or identified automatically.

Claim 46. (Currently Amended) The device according to Claim 44, wherein the data processing unit is formed in such a way that a limitation of the direct determination of the actual position by means of the global positioning system is recognizable and an alarm and/or an automated derivation of the actual position is triggered.

Claim 50. (Currently Amended) A geodetic instrument comprising a unit for global position determination by means of a global positioning system based on the reception of shadowable signals of the global positioning system and a device [[according to claim 44.]] comprising: an image recording unit;

a telemeter, wherein the telemeter is integrated in the image recording unit;
and a data processing unit configured to derive an actual position, wherein
the device is configured to perform the following method in an automated
manner:

recording of a first piece of image information from a first known
position determined by means of the global positioning system which is
based on the reception of shadowable signals of the global positioning
system and the dead range within which the propagation of the
shadowable signals of the global positioning system are impaired in such a
way that a direct determination of the actual position by means of the
global positioning system is at least limited, the first piece of image
information having at least two identifiable reference structures on a
building which can be detected at least from a partial region of the dead
range and measurement of at least one first distance from the first known
position, the first distance being coordinated indirectly or directly with the
said at least two identifiable reference structures on the building;

recording of a second piece of image information from a second
known position determined by means of the global positioning system,
wherein the global positioning system includes a satellite-supported
system, the second piece of image information having at least the said two
identifiable reference structures on the building and measurement of at
least one second distance from the second known position, the second

distance being coordinated indirectly or directly with the said at least two identifiable reference structures on the building;

recording of a piece of actual image information from the actual position, the actual image information having the said at least two identifiable reference structures on the building and measurement of at least one actual distance from the actual position, the actual distance being coordinated indirectly or directly with the said at least two identifiable reference structures on the building, wherein the recording of the first and second pieces of image information and the measurement of the first and second distances are carried out in an automated manner; and

derivation of the actual position of the geodetic instrument by referencing relative to the said at least two identifiable reference structures on the building, wherein in the derivation of the actual position, a transformation is used which links the actual position via the said at least two identifiable reference structures on the building in the first and second image information to the first known position and the second known position, wherein the said at least two identifiable reference structures on the building are tracked and/or identified automatically.

Claim 51. (Currently Amended) The geodetic instrument according to claim 50, wherein the unit for global position determination including a reflector for geodetic surveying or a GPS receiver.

Claim 52. (Currently Amended) A non-transitory data medium having a computer program stored on the data medium for carrying out the method **[[according to claim 21.]] comprising;**

recording of a first piece of image information from a first known position determined by means of a global positioning system which is based on the reception of shadowable signals of the global positioning system and the dead range within which the propagation of the shadowable signals of the global positioning system are impaired in such a way that a direct determination of the actual position by means of the global positioning system is at least limited, the first piece of image information having at least two identifiable reference structures on a building which can be detected at least from a partial region of the dead range and measurement of at least one first distance from the first known position, the first distance being coordinated indirectly or directly with the said at least two identifiable reference structures on the building;

recording of a second piece of image information from a second known position determined by means of the global positioning system, wherein the global positioning system includes a satellite-supported system, the second piece of image information having at least the said two identifiable reference structures on the building and measurement of at least one second distance from the second known position, the second

distance being coordinated indirectly or directly with the said at least two identifiable reference structures on the building;

recording of a piece of actual image information from the actual position, the actual image information having the said at least two identifiable reference structures on the building and measurement of at least one actual distance from the actual position, the actual distance being coordinated indirectly or directly with the said at least two identifiable reference structures on the building, wherein the recording of the first and second pieces of image information and the measurement of the first and second distances are carried out in an automated manner; and

derivation of the actual position of the geodetic instrument by referencing relative to the said at least two identifiable reference structures on the building, wherein in the derivation of the actual position, a transformation is used which links the actual position via the said at least two identifiable reference structures on the building in the first and second image information to the first known position and the second known position, wherein the said at least two identifiable reference structures on the building are tracked and/or identified automatically.

The following is an examiner's statement of reasons for allowance: None of the cited prior arts disclose or suggests alone or in combination the limitations "derivation of the actual position of the geodetic instrument by referencing

relative to the said at least two identifiable reference structures on the building, wherein in the derivation of the actual position, a transformation is used which links the actual position via the said at least two identifiable reference structures on the building in the first and second image information to the first known position and the second known position, wherein the said at least two identifiable reference structures on the building are tracked and/or identified automatically” as recited in independent claims 21,41,50 and 52. Dependent claims 22-24, 26, 28-29,32-33,35-36,38,42-49 and 51 depends directly or indirectly from the allowed claims 21,41 and 50 therefore they are allowed.

Note: Claim 52 is statutory. The support for the limitations is in the originally filed claim 20 on 03/21/2006 and claim 52 on 07/20/2006. The currently amended claim excludes the non-statutory limitations of data signal from the claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAYESH A. PATEL whose telephone number is (571)270-1227. The examiner can normally be reached on 5-4-9.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on 571-272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

08/29/2011
/JAYESH A PATEL/
Primary Examiner, Art Unit 2624